GEO Engineering

150 Mineral Spring Drive
Dover, New Jersey 07801
201 361-3600 FAX 361-3800

May 5, 1994

Douglas Stuart
New Jersey Department of Environmental Protection and Energy
Bureau of Environmental Evaluation and Cleanup Responsibility Assessment
401 East State Street, CN-028
Trenton, NJ 08625

SUBJ: **Hexcel Corporation**
Lodi, Bergen County, NJ
ISRA Case No. 86009

Dear Mr. Stuart:

We have been asked by Hexcel Corporation and its authorized agent, Edward Hogan, Esq., to respond to your March 16, 1994 letter and provide you a revised schedule and cost estimate. The revised schedule and cost estimate are attached. As with the previous schedule, note that the initiation of many of the tasks is dependent on first obtaining approval by Fine Organics and the appropriate regulatory authorities for temporary use of the existing sewer lines.

As required, we intend to initiate DNAPL recovery as soon as possible. The current recovery system is not operational. We intend to replace the current system with a temporary automated system until permanent modifications or repairs can be made to the current system, and the necessary permits acquired. The timing and cost of this plan are reflected in the schedule and cost estimate.

We are requesting an extension to the apparent requirement for the construction of a DNAPL barrier along the Saddle River. Whereas this barrier may prove to be appropriate, it cannot be designed and configured until hydraulic testing is completed and the effects of such a barrier on DNAPL recovery are understood. Additionally, it should not be constructed until hydraulic control is achievable as uncoordinated construction of a ground water barrier can cause adverse effects including significant unintended spreading of contamination. We do not see this as a significant delay as construction cannot proceed

without a stream encroachment permit, which will take time to acquire. Therefore, we will submit an assessment, and if appropriate, a proposal for this hydraulic barrier at the conclusion of hydraulic testing, at which time the barrier will be incorporated into the construction schedule at a point consistent with the need for achieving hydraulic control and acquiring the necessary permits.

We intend to undertake the bedrock ground water investigation in the area of MW-1 and MW-17. Due to the concentrations of shallow contamination in this area, the installation of deep bedrock monitor wells would run a significant risk of cross-contamination. It is unadvisable to assume this risk until hydraulic control is achieved in the shallow zone, thus mitigating the risk. Therefore, the attached schedule allows for this bedrock investigation subsequent to the establishment of hydraulic control in the shallow zone.

The attached schedule and cost estimate reflect the ground water testing you require on the other side of the Saddle River. Note that we cannot proceed with this testing until access has been obtained and this may cause delay or complication. Furthermore, we remain concerned that this testing will demonstrate negative conditions unrelated to Hexcel at a junkyard which is one of the potential contaminant sources in the area. We are also concerned that a well could be subjected to tampering or damage as it would be outside of Hexcel's control. To eliminate this latter concern, we propose to collect a ground water sample directly from the subsurface during drilling with a Geoprobe machine or the equivalent and thus forego the installation of a well.

Lastly, we have scheduled and included in the cost estimate the additional off-site wells south of MW-22 and MW-31. However, we are not confident that an adequate location can be found, as the area south of these wells contains buildings and facilities for the neighboring operation. We cannot damage the structures or severely inconvenience the neighboring operations. We will contact you as soon as a safe location most appropriate for the intended purpose is identified. As with the other off-site testing, initiation of this well installation is dependent on obtaining access to the neighboring property.

With the above, we trust the attached schedule and cost estimate are in compliance with your March 16 and April 14 letters.

Sincerely,

GEO ENGINEERING, INC.

Marjorie A. Piette
Project Manager

John A. Rhodes
Vice President

MAP/JAR/avm
enclosures
cc A. William Nosil
Edward Hogan, Esq.
James Higdon
Joseph Nowak
Maurice Migliarino

TABLE 1. ESTIMATED SCHEDULE OF REMAINING REMEDIAL ACTIVITIES
Former Hexcel Facility
Lodi, New Jersey

GEO Engineering, Inc.
May, 1994
file: 94039\sched1.xls

YEAR 1

TASK DESCRIPTION	Time in Months (after approval for temporary use of existing sewer) 1	2	3	4	5	6	7	8	9	10	11	12
GROUND WATER REMEDIATION												
Operate DNAPL recovery (temporary)												
Conduct testing												
--Conduct hydraulic testing												
--Pilot test of recovery system												
--Test ground water off-site												
--Obtain off-site access												
--Sample across river (Geoprobe)												
--Install/develop wells south of site												
--Collect and analyze samples												
Design ground water recovery system												
Obtain permits												
--Permits for sewer extension												
--Permits for water discharge												
--Air permit modifications												
Construct recovery system												
--Install permanent recovery system												
--Construct new sewer line												
--Construct DNAPL barrier (if approp.)												
Operate and maintain recovery system												
Bedrock ground water invest. (MW-1)												
CLEANING OF SEWER LINE												
Cleanout/abandonment of sewer line												
Collect samples (and lab. analysis)												
Disposal of sludge/debris												
SOIL REMEDIATION												
Soil gas survey												
Prepare work plan for pilot test												
NJDEPE review of work plan												
Conduct pilot test (incl. lab. analysis)												
Design air sparging/vapor ext. system												
Obtain permits												
Excavate and dispose of soil												
Install soil remediation system												
Operate and maintain system												
REPORTING												
Prepare quarterly progress reports												
Prepare final report												
NJDEPE review and site inspection												
Case closure												

883170004

TABLE 1. ESTIMATED SCHEDULE OF REMAINING REMEDIAL ACTIVITIES
Former Hexcel Facility
Lodi, New Jersey

GEO Engineering, Inc.
May, 1994
file: 94039\sched1.xls

YEAR 2

TASK DESCRIPTION	Time in Months (after approval for temporary use of existing sewer) 13	14	15	16	17	18	19	20	21	22	23	24
GROUND WATER REMEDIATION												
Operate DNAPL recovery (temporary)												
Conduct testing												
--Conduct hydraulic testing												
--Pilot test of recovery system												
--Test ground water off-site												
--Obtain off-site access												
--Sample across river (Geoprobe)												
--Install/develop wells south of site												
--Collect and analyze samples												
Design ground water recovery system												
Obtain permits												
--Permits for sewer extension												
--Permits for water discharge												
--Air permit modifications												
Construct recovery system												
--Install permanent recovery system												
--Construct new sewer line												
--Construct DNAPL barrier (if approp.)												
Operate and maintain recovery system												
Bedrock ground water invest. (MW-1)												
CLEANING OF SEWER LINE												
Cleanout/abandonment of sewer line												
Collect samples (and lab. analysis)												
Disposal of sludge/debris												
SOIL REMEDIATION												
Soil gas survey												
Prepare work plan for pilot test												
NJDEPE review of work plan												
Conduct pilot test (incl. lab. analysis)												
Design air sparging/vapor ext. system												
Obtain permits												
Excavate and dispose of soil												
Install soil remediation system												
Operate and maintain system												
REPORTING												
Prepare quarterly progress reports												
Prepare final report												
NJDEPE review and site inspection												
Case closure												

883170005

TABLE 1. ESTIMATED SCHEDULE OF REMAINING REMEDIAL ACTIVITIES
Former Hexcel Facility
Lodi, New Jersey

GEO Engineering, Inc.
May, 1994
file: 94039\sched1.xls

YEAR 3

TASK DESCRIPTION	Time in Months (after approval for temporary use of existing sewer) 25	26	27	28	29	30	31	32	33	34	35	36
GROUND WATER REMEDIATION												
Operate DNAPL recovery (temporary)												
Conduct testing												
--Conduct hydraulic testing												
--Pilot test of recovery system												
--Test ground water off-site												
--Obtain off-site access												
--Sample across river (Geoprobe)												
--Install/develop wells south of site												
--Collect and analyze samples												
Design ground water recovery system												
Obtain permits												
--Permits for sewer extension												
--Permits for water discharge												
--Air permit modifications												
Construct recovery system												
--Install permanent recovery system												
--Construct new sewer line												
--Construct DNAPL barrier (if approp.)												
Operate and maintain recovery system												
Bedrock ground water invest. (MW-1)												
CLEANING OF SEWER LINE												
Cleanout/abandonment of sewer line												
Collect samples (and lab. analysis)												
Disposal of sludge/debris												
SOIL REMEDIATION												
Soil gas survey												
Prepare work plan for pilot test												
NJDEPE review of work plan												
Conduct pilot test (incl. lab. analysis)												
Design air sparging/vapor ext. system												
Obtain permits												
Excavate and dispose of soil												
Install soil remediation system												
Operate and maintain system												
REPORTING												
Prepare quarterly progress reports												
Prepare final report												
NJDEPE review and site inspection												
Case closure												

883170006

TABLE 1. ESTIMATED SCHEDULE OF REMAINING REMEDIAL ACTIVITIES
Former Hexcel Facility
Lodi, New Jersey

GEO Engineering, Inc.
May, 1994
file: 94039\sched1.xls

YEAR 4

TASK DESCRIPTION	Time in Months (after approval for temporary use of existing sewer) 37	38	39	40	41	42	43	44	45	46	47	48
GROUND WATER REMEDIATION												
Operate DNAPL recovery (temporary)												
Conduct testing												
--Conduct hydraulic testing												
--Pilot test of recovery system												
--Test ground water off-site												
--Obtain off-site access												
--Sample across river (Geoprobe)												
--Install/develop wells south of site												
--Collect and analyze samples												
Design ground water recovery system												
Obtain permits												
--Permits for sewer extension												
--Permits for water discharge												
--Air permit modifications												
Construct recovery system												
--Install permanent recovery system												
--Construct new sewer line												
--Construct DNAPL barrier (if approp.)												
Operate and maintain recovery system												
Bedrock ground water invest. (MW-1)												
CLEANING OF SEWER LINE												
Cleanout/abandonment of sewer line												
Collect samples (and lab. analysis)												
Disposal of sludge/debris												
SOIL REMEDIATION												
Soil gas survey												
Prepare work plan for pilot test												
NJDEPE review of work plan												
Conduct pilot test (incl. lab. analysis)												
Design air sparging/vapor ext. system												
Obtain permits												
Excavate and dispose of soil												
Install soil remediation system												
Operate and maintain system												
REPORTING												
Prepare quarterly progress reports												
Prepare final report												
NJDEPE review and site inspection												
Case closure												

883170007

TABLE 1. ESTIMATED SCHEDULE OF REMAINING REMEDIAL ACTIVITIES
Former Hexcel Facility
Lodi, New Jersey

GEO Engineering, Inc.
May, 1994
file: 94039\sched1.xls

YEAR 5

TASK DESCRIPTION	Time in Months (after approval for temporary use of existing sewer) 49	50	51	52	53	54	55	56	57	58	59	60
GROUND WATER REMEDIATION												
Operate DNAPL recovery (temporary)												
Conduct testing												
--Conduct hydraulic testing												
--Pilot test of recovery system												
--Test ground water off-site												
--Obtain off-site access												
--Sample across river (Geoprobe)												
--Install/develop wells south of site												
--Collect and analyze samples												
Design ground water recovery system												
Obtain permits												
--Permits for sewer extension												
--Permits for water discharge												
--Air permit modifications												
Construct recovery system												
--Install permanent recovery system												
--Construct new sewer line												
--Construct DNAPL barrier (if approp.)												
Operate and maintain recovery system												
Bedrock ground water invest. (MW-1)												
CLEANING OF SEWER LINE												
Cleanout/abandonment of sewer line												
Collect samples (and lab. analysis)												
Disposal of sludge/debris												
SOIL REMEDIATION												
Soil gas survey												
Prepare work plan for pilot test												
NJDEPE review of work plan												
Conduct pilot test (incl. lab. analysis)												
Design air sparging/vapor ext. system												
Obtain permits												
Excavate and dispose of soil												
Install soil remediation system												
Operate and maintain system												
REPORTING												
Prepare quarterly progress reports												
Prepare final report												
NJDEPE review and site inspection												
Case closure												

883170008

TABLE 2. COST ESTIMATE
Former Hexcel Facility
Lodi, New Jersey

GEO Engineering, Inc.
May, 1994
file:94039\cost1.xls

TASKS SPECIFIED IN 2/24/94 LETTER	COST ESTIMATE (in thousands)
I. Discharge Permit Issues	$26
II. Air Permit Issues (including acid gas control)	$150-$260
III. System Startup Activities	
A. Operation and Performance Assessment	$50
B. Modifications to System	$100-$245
C. Full Scale Operation (does not include the cost for a full-time operator)	$1100-$1200
D. Hazardous Waste Disposal	$250-$400
IV. Pilot Scale Studies of Soils Remedial Alternatives	$615-$665
V. Sewer Line Cleaning/Abandonment	$375
VI. Air Sparging/Vapor Extraction System (design/specify/permit/install/operate)	$1100-$1150
TOTAL	$3766-$4371

ADDITIONAL ITEMS IN 5/5/94 LETTER	COST ESTIMATE (in thousands)
Temporary DNAPL Recovery	$65
Off-Site Testing (install wells/Geoprobe/sample)	$25
Construct DNAPL Barrier (if appropriate)	To be estimated after design if determined to be necessary
Bedrock Ground Water Investigation (in the vicinity of MW-1 and MW-17)	$10

4.471 Million

883170009

GEO Engineering

150 Mineral Spring Drive
Dover, New Jersey 07801
201 361-3600 FAX 361-3800

April 28, 1994

Joseph J. Nowak
New Jersey Department of Environmental Protection and Energy
Bureau of Environmental Evaluation and Cleanup Responsibility Assessment
401 East State Street
Trenton, NJ 08625

SUBJ: **Hexcel Corporation**
Lodi Borough, Bergen County
ISRA Case 86009

Dear Mr. Nowak:

GEO Engineering, Inc. has recently been engaged as a technical consultant for the Lodi cleanup. We have been asked by Hexcel Corporation and its authorized agent, Edd Hogan, to contact you.

Our first task is to prepare a remedial schedule and cost estimate in accordance with your requirements. We anticipate accomplishing this task by May 5 which is the due date contained in your recent letter to Edd Hogan.

We will attempt to call you this week and, of course, are available should you wish to contact us. We are looking forward to working with you.

Sincerely,

GEO ENGINEERING, INC.

Marjorie A. Piette
Project Manager

John A. Rhodes, P.E.
Vice President

MAP/JAR/avm
cc W. Nosil
E. Hogan

883170010